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the family also. As Mr. Meehan remarks in the same number of the BULLETIN, this lawless trait of the humble-bee may be easily observed. It is an acquired habit, and one that has not yet reached its fullest development, for, while some species of flowers are invariably punctured, others, which are even more difficult of access, are approached in the legitimate manner and are never mutilated. In some localities, hardly an individual of *Gerardia integrifolia* will escape being punctured, and always, so far as I have observed, in the same relative portion of the corolla. In both cases, too, the corolla is bored before its lobes have been unfolded; yet not all the bees seem to understand this, for while by far the greatest numbers fly at once to the puncture made by some previous visitor, others will visit every flower in the regular manner, showing that some understand the operation while others do not. Again, although the *Gerardia* is commonly punctured, it has a comparatively open and accessible corolla, and, on the other hand, the corolla of *Linaria vulgaris*, which is thoroughly closed, is, I believe, never punctured, though the bees visit it in numbers and are forced to no slight exertion to reach its interior.

To me the interpretation of these facts is that while there is the appearance of a purpose in the act, yet it is in the main a blind operation on the part of the bees, and, in any event, they fail to derive the greatest possible benefit from their work, when they persist in boring an open corolla and approach a closed one in the laborious manner which its peculiar mechanism demands.

Mountainville, N. Y.

WINTHROP E. STONE.

Dicentra Punctured by Humble-Bees.—In the last number of the BULLETIN, (p. 55) Prof. W. Whitman Bailey, of Rhode Island, says: "I find that in my garden the flowers of *Dicentra Cucullaria* are systematically punctured by humble-bees; I have watched them in the process. Has this been noticed when the plants are growing wild? It sadly interferes with the very neat mechanism for cross-fertilization."

Several years ago Dr. A. K. Fisher called my attention to the fact that humble-bees were in the habit of obtaining honey from this species by biting through the base of the corolla; and I have since observed that, along the borders of the Adirondack region, in North-eastern New York, it is the exception to find a mature flower of either *Dicentra Cucullaria* or *D. Canadensis* that has not been thus punctured. Whatever be its theoretical bearings upon the fertilization of these plants, the fact remains that both species still thrive here, growing abundantly and in luxuriance.

Locust Grove, New York.

C. HART MERRIAM.

Dicentra Punctured by Humble-Bees.—In reading Prof. Bailey's note in the May BULLETIN on the perforation of the flowers of *Dicentra Cucullaria* by humble-bees, I am reminded that the late Mr. Leggett once noted a similar circumstance in plants sent to him from Lewis Co., N. Y. For the benefit of those who are not fortunate enough to possess a complete set of the BULLETIN, I make the following extract from Mr. Leggett's note:* "C. went to the woods

* Extract from a letter sent to Mr. L. from Lewis Co., BULLETIN, iii., 33.

and spent several hours watching the bees. The woods were full of *Dicentras* this spring. He could not find a spike of any species on which there were not one or more punctured flowers. He saw several humble-bees performing this labor, and many honey-bees sucking the honey, but in no instance did he see the honey-bee make the incision."

N. L. BRITTON.

Teratology.—A head of the ox-eye daisy (*Chrysanthemum leucanthemum*, L.) has just been brought to me by a lady (Mrs. Cowles) living in Hamden which has the rays replaced by white tubular corollas one-quarter of an inch long, gradually amplified outwards, and irregularly 5-lobed. Most of these corollas are somewhat bilabiate, with three parts in the lower lip, and two, a little smaller, in the upper. The veins of the lobes are submarginal and unite below the sinuses, as in the normal disc-flowers of the order. These ray-flowers have both stamens and a short, included style, like that of the disc-flowers. The ray-flowers are in general structure comparable to those of *Chaenactis*, but there are no gradations from them to the disc-flowers in this specimen. Is this condition to be explained by a simple reversion of the usual rays to a form more like that of the disc-flowers, or by supposing the ray-flowers to be deficient, and the exterior disc-flowers to be enlarged so as to replace the rays? One of these exterior flowers, which I dissected, had the ovule well developed, and it is probable that all would have been fertile.

Mrs. Cowles tells me that the plant bore six heads like the one sent to me.

New Haven, June, 1884.

DANIEL C. EATON.

Another Florida Fern has been lately discovered by Miss Mary C. Reynolds, viz., *Phegopteris tetragona*, Mett. This is one of the species which has sometimes the faintest rudiment of an indusium, and so has been referred to *Aspidium* in Mettenius's later writings. It has a creeping rhizoma, and rather thin herbaceous and finely pubescent fronds one or two feet high. These are pinnate with a gradually decreasing apex and several pairs of long and not very deeply pinnatifid pinnæ. The veins are simple, and the 2-3 basal ones are connivent as in *Aspidium molle*. It is common in the West Indies, and on the continent from Panama to Brazil. Miss Reynolds "found it a year ago in a live-oak hummock in Marion County, well established there, and a very pretty fern it is, too." "When growing, there is a metallic lustre about it that to me is very pleasing."

New Haven, June, 1884.

DANIEL C. EATON.

Albinism.—During the winter and spring I have found, usually single plants only, sometimes several clusters, of the following species with pure white blossoms. The whole plant was of a lighter green than usual, no other color being present: *Delphinium decorum*, F.&M. (one specimen); *Sidalcea humilis*, Gray (two specimens); *Erythraea venusta*, Gray (several clusters); *Gilia dianthoides*, Endl. (common in places); *Linaria Canadensis*, Dum. (one case); *Orthocarpus purpurascens*, Benth. (often nearly white); *Mirabilis Californica*, Gray